

Lloyd's Register of Shipping.

SURVEYS FOR FREEBOARD.

(COMPUTATION FOR STEAMER, SAILING SHIP, TANKER.)

Ship's Name **BALTABOR** T. S. "CUMBAL"

Official Number **166411**

Nationality and Port of Registry **BRITISH LONDON**

Gross Tonnage **2433** **2592**

Date of Build **1924-9**

Port of Survey **LIVERPOOL**

Date of Survey **24th Jan 1938 and subsequently**

Surveyor's Signature **D. S. Forsyth**

Particulars of Classification **+100 A.I. WITH FREEBOARD**

Moulded Dimensions: Length **300-0'** Breadth **45.45'** Depth **21.5' to MAIN DK.**

Moulded displacement at moulded draught = 85 per cent. of moulded depth **4995** tons

Coefficient of fineness for use with Tables **.697.**

Depth for Freeboard (D).

Moulded depth ... **21.50'**

Plating on exposed deck **.03'**

Depth for Freeboard (D) = **21.53**

Depth correction.

(a) Where D is greater than Table depth (D-Table depth) R = **(21.53 - 20.00) 2.308 = + 3.53"**

(b) Where D is less than Table depth (if allowed) (Table depth-D) R = **1.53**

If restricted by superstructures ☒

Round of Beam correction.

Moulded Breadth (B) **45.45'**

Standard Round of Beam = $\frac{B \times 12}{50} = 10.98$

Ship's Round of Beam (MAIN DK.) = **NIL**

Difference **deficient = 10.98"**

Restricted to

Correction = $\frac{\text{Diff}}{4} \times (1 - \frac{S_1}{L}) = \frac{10.98}{4} \times .0562 = +.15"$

DEDUCTION FOR SUPERSTRUCTURES.

	Mean Covered Length (S)	Equivalent Enclosed Length (S ₁)	Height	Height Correction	Effective Length (E)
Open enclosed ...	10.50	10.50	8.67	✓	10.50
Overhang ...	36.33	18.16	8.67	✓	18.16
Q.D. enclosed ...					
Overhang ...					
Edge enclosed. EQUIVALENT	204.15	204.15	8.50	✓	204.15
Overhang aft ...	44.60	33.45	8.58	✓	33.45
Overhang forward ...					
Enclosed ...					
Overhang ...					
Deck aft ...					
Forward ...					
Deck opening aft ...	4.42	16.87			16.87
" forward ...					
Total ...	300.00	283.13			283.13

Standard Height of Superstructure **6.50'**

" " R.Q.D. ☒

Deduction for complete superstructure **35.33'**

Percentage covered $\frac{S}{L} = 100.00$

" $\frac{S_1}{L} = 94.38$

" $\frac{E}{L} = 94.38$

Percentage from Table, Line A. **93.08**

(corrected for absence of forecastle (if required)) ☒

Percentage from Table, Line B. ☒

(corrected for absence of forecastle (if required)) ☒

Interpolation for bridge less than 2L (if required) ☒

Deduction = **35.33 x .9308 = 32.89**

SHEER CORRECTION.

Station	Standard Ordinate	S	M	Product	Actual Ordinate	Effective Ordinate	S	M	Product
...	40.00	1		40.00	35.5	59.50	1		59.50
From A.P. ...	17.80	4		71.20	13.0	26.48	4		105.92
" ...	4.40	2		8.80	2.0	6.54	2		13.08
Ships ...	-	4		-	✓		4		-
From F.P. ...	8.80	2		17.60	9.0	10.67	2		21.34
" ...	35.60	4		142.40	33.0	43.16	4		172.64
... ..	80.00	1		80.00	73.0	97.00	1		97.00
Total ...				360.00	+24.0				469.48

Mean actual sheer aft = **Excess**

Mean standard sheer aft = **Excess**

Mean actual sheer forward = **Excess**

Mean standard sheer forward = **Excess**

Length of enclosed superstructure forward of amidships = **6.1.1.**

" " aft of " = **6.1.1.**

Correction = $\frac{\text{Difference between sums of products}}{18} \left(\frac{75 - \frac{S}{2L}}{2} \right) = \frac{109.48}{18} \times .25 = -1.52"$

If limited on account of midship superstructure.

If limited to maximum allowance of 1½ ins. per 100 ft.

Deduction for Tropical Freeboard.

Deduction for Winter and Winter North Atlantic Freeboard.

Depth to Freeboard Deck = **21.53**

Summer freeboard = **1.10**

Moulded draught (d) = **20.43**

Deduction for Tropical freeboard and addition for

Winter freeboard = $\frac{d}{4}$ inches = **5.11 = 5"**Addition for Winter North Atlantic Freeboard (if required) = **4"**

Deduction for Fresh Water.

Displacement in salt water at summer load water line

 $\Delta = 5751$

Tons per inch immersion at summer load water line

 $T = 25.7$ Deduction = $\frac{\Delta}{40T}$ inches**= 5.59 = 5½"**

TABULAR FREEBOARD corrected for Fresh Deck (if required)

Correction for coefficient $\frac{.697 + .68}{1.36} = \frac{1.377}{1.36}$

	+	-
Depth Correction ...	3.53	-
Deduction for superstructures ...	-	32.89
Sheer correction ...	-	1.52
Round of Beam correction15	-
Correction for Thickness of Deck amidships ...	-	-
Other corrections, scantlings, etc. ...	-	-
	3.68	34.41

Summer Freeboard = **13.21**

SUMMER FREEBOARD amidships from Centre of Disc to top of Deck Line, Steel, Deck :-

Tropical Fresh Water Line above Centre of Disc ...	10½"
Fresh Water Line " " ...	5½"
Tropical Line " " ...	5"
Winter Line below " " ...	5"
Winter North Atlantic Line " " ...	7"

Tropical Fresh Water Freeboard ...	0.2¾"
Fresh Water " " ...	0.7¾"
Tropical " " ...	0.8¾"
Winter " " ...	1.67½"
Winter North Atlantic " " ...	1.87½"

22 MAR 1938

005840-005848-0096

RECEIVED

12 APR 1938

Baltabor.

A new form should be prepared if any alterations that affect the freeboard have been made. If no such alterations have been made, the Surveyor should endorse the form on this side with his signature and the date.

Bridge Aft Bulkhead (Equivalent)

$$\frac{11.33 \times 28.67}{45.75} = 7.10$$

211.08
7.10
203.98 enclosed

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Trade of ship

London - Baltic, General cargoes and part refrigerated

Names of sister ships

T.S. "CHIMU"

Builder's name and yard number

Aktieb Götaverken, Gothenburg (N° 346)

Owners

United Baltic Corporation, Ltd.

Fee £

12 : 0 : 0



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